

ARS Role in Invasive Species Management

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ARS Areas of Research on Invasive Species

- Prevention/Exclusion
 - Early Detection and Response
 - Control, Management, and Restoration
 - Research and Monitoring
 - International Measures
 - Public Outreach and Partnerships
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ARS

Invasive Species Research

	Funding	SYs
Diseases	\$10,370,200	17
Weeds	\$44,054,300	98
Arthropods	\$75,161,700	181
	\$129,586,200	296

Disease Targets for ARS Invasive Species Programs

- **Ralstonia bacterial wilt**
 - **Plum Pox Virus/Sharka Disease**
 - **Karnal bunt**
 - **Citrus Bacterial Canker, Asian strain**
 - **Sudden Oak Death**
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Weed Targets for ARS Invasive Species Programs

- Arundo/giant reed
 - Canada thistle
 - Cheat grass/downy brome
 - Field bindweed
 - Knapweeds
 - Leafy spurge
 - Melaleuca
 - Giant salvinia
 - Old world climbing fern
 - Cape or German ivy
 - Purple loosestrife
 - Russian thistle
 - Saltcedar
 - Scotch thistle
 - Tropical soda apple
 - Yellow starthistle
 - Waterhyacinth
 - Teasel
 - Dalmation toadflax
 - Kudzu
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Arthropod Targets for ARS Invasive Species Programs

- Asian longhorned beetle
 - Formosan subterranean termite
 - Glassy-winged sharpshooter /Pierce's disease
 - Gypsy moth/Asian gypsy moth
 - Pink Hibiscus mealybug
 - Africanized honey bees
 - Chinese soybean & Russian wheat aphids
 - Small hive beetle
 - Imported fire ant
 - Fruit flies – olive
 - Thrips
 - Mites – varroa tracheal citrus
 - Lobate lac scale
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Area Wide Pest Management Programs

- **Leafy spurge**
 - **Fruit flies**
 - **Tarnished plant bugs**
 - **Russian wheat aphid**
 - **Melaleuca**
 - **Corn rootworm**
 - **Stored grain insects**
 - **Codling moth**
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The Role of Economics in ARS Invasive Species Programs

- **Establish research priorities**
 - **Demonstrate actual/potential economic impact of IS on various commodities**
 - **Demonstrate the economic impact of a given class of IS on agriculture and natural areas**
 - **Demonstrate the economic impact of a specific IS on agriculture and natural areas**
 - **Demonstrate the economic impact of current and past ARS research on IS**
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